U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES CENTERS FOR DISEASE CONTROL NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH

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ADVISORY BOARD ON RADIATION AND WORKER HEALTH

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ROCKY FLATS WORK GROUP

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MONDAY, JULY 20, 2009

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The work group meeting convened via teleconference at 10:00 a.m., Mark Griffon, Chairman, presiding.

PRESENT:

(202) 234-4433

MARK GRIFFON, Chairman MICHAEL H. GIBSON, Member WANDA I. MUNN, Member ROBERT W. PRESLEY, Member

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ALSO PRESENT:

TED KATZ, Designated Federal Official NANCY ADAMS, NIOSH Contractor TERRIE BARRIE, ANWAG CAROLYN BOLLER, Office of Senator Mark Udall SHANNON BRADFORD, NIOSH OCAS LARRY ELLIOTT, NIOSH OCAS JASON BROEHM, HHS EMILY HOWELL, ESQ., HHS BONNIE KLEA, Participant ROY LLOYD, HHS ARJUN MAKHIJANI, SC&A JOHN MAURO, SC&A ROBERT McGOLERICK, HHS DAN McKEEL, Dow, Petitioner JIM NETON, NIOSH OCAS JUDY PADILLA, Participant MUTTY SHARFI, ORAU BRANT ULSH, NIOSH OCAS

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1	P-R-O-C-E-E-D-I-N-G-S
2	(10:04 a.m.)
3	MR. KATZ: Okay. I think why
4	don't we just go ahead, do roll call, and I
5	guess Wanda will join us when she can.
6	Okay. This is the Rocky Flats
7	Working Group of the Advisory Board on
8	Radiation and Worker Health. My name is Ted
9	Katz, and I am the Acting Designated Federal
10	Official for the Advisory Board. And we are
11	meeting this morning to discuss the Ruttenber
12	data and other data used in relation to Rocky
13	Flats, and particularly in relation to neutron
14	exposures.
15	So we will begin with roll call,
16	and beginning with the Board members. And,
17	please, for everybody in roll call, other than
18	the public, but all the government employees
19	please state your conflict of interest
20	situation when you say your name, starting
21	with Mark.
22	CHAIRMAN GRIFFON: Mark Griffon.
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5 I'm the Rocky Flats Work Group Chair. 1 2 MR. KATZ: No conflicts? 3 CHAIRMAN GRIFFON: No conflict. MEMBER PRESLEY: This is Robert 4 5 Presley, no conflict. 6 MEMBER GIBSON: Mike Gibson, no conflict. 7 MEMBER MUNN: Wanda Munn, 8 no conflict. 9 MR. KATZ: Was that Wanda? 10 MEMBER MUNN: Yes. 11 MR. KATZ: Welcome, Wanda. 12 13 MEMBER MUNN: Thank you. KATZ: Okay. That is the 14 MR. 15 Board members. And now for the NIOSH and the 16 ORAU team, please? ELLIOTT: Larry Elliott, 17 MR. Director of OCAS, no conflict. 18 19 DR. NETON: Jim Neton, NIOSH, no 20 conflict. MS. BRADFORD: Shannon Bradford, 21 22 NIOSH, no conflict. **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W. (202) 234-4433 WASHINGTON, D.C. 20005-3701 www.nealrgross.com

6 ULSH: This is Brant 1 DR. Ulsh, 2 NIOSH OCAS, no conflict. 3 MR. SHARFI: Mutty Sharfi, ORAU team, no conflict. 4 5 MR. KATZ: Okay. That does it for 6 NIOSH/ORAU team. How about SC&A? 7 John Mauro here, no DR. MAURO: conflict. 8 DR. MAKHIJANI: John Mauro Arjun 9 10 -- John Mauro. (Laughter.) 11 Arjun Makhijani. It's early here. 12 13 (Laughter.) I woke up too early. No conflict. 14 That's it for 15 MR. KATZ: Okay. 16 SC&A. Then, how about other federal employees, NIOSH or otherwise? HHS, DOL, DOE? 17 MS. HOWELL: Emily Howell, HHS, no 18 19 conflict. 20 MR. BROEHM: Jason Broehm, CDC, no conflict. 21 22 Roy Lloyd, HHS, MR. LLOYD: no **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W. (202) 234-4433 WASHINGTON, D.C. 20005-3701 www.nealrgross.com

1 conflict.

2 MR. McGOLERICK: Robert 3 McGolerick, HHS, no conflict. Okay. 4 MR. KATZ: Then any representatives 5 of congressional offices, б staff of congressional offices? BOLLER: Carolyn Boller, 7 MS. Senator Mark Udall. 8 MR. KATZ: Okay. And then members 9 of the public, if you would like to identify 10 yourselves, you are welcome to at this point, 11 12 if you want to be in the transcript. 13 MS. PADILLA: My name is Judy I am a former Rocky Flats nuclear Padilla. 14 15 worker, and I have a conflict. 16 MR. KATZ: There are no conflicts for the members of the public, actually. But, 17 Judy, can you just spell your last name, 18 19 please? 20 MS. PADILLA: P-A-D-I-L-L-A. MR. KATZ: Thank you. 21 22 MS. Ted, Nancy Adams, ADAMS: **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W. (202) 234-4433 WASHINGTON, D.C. 20005-3701 www.nealrgross.com

1 NIOSH contractor. Also, I went looking on the 2 website for the Ruttenber report, and I -- it 3 is not easy to find. I have not been able to find it, just in case somebody had a URL for 4 5 it. б MR. KATZ: Okay. Well, we can 7 maybe get to that in a second, but let's continue with members of the public. 8 This is Terrie Barrie MS. BARRIE: 9 10 with ANWAG. MR. KATZ: Welcome, Terrie. 11 MS. BARRIE: 12 Good morning. This is Bonnie Klea 13 MS. KLEA: from the Santa Susanna Field Laboratory in 14 California. 15 16 MR. KATZ: Welcome, Bonnie. MS. KLEA: Thank you. 17 18 MR. KATZ: Okay. Any other 19 members of the public? 20 (No response.) All right, then. Then, let me 21 22 just remind everyone that's on the phone, **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W. (202) 234-4433 WASHINGTON, D.C. 20005-3701 www.nealrgross.com

1 members of the public, et al., please mute 2 your phone except when you are part of the 3 discussion. And if you don't have a mute button on your phone, you can use *6. 4 That will mute it. And then, if you need to come 5 б back on to speak, you just press *6 again, and 7 that will unmute your phone. So please do that, and please do not put the phone on hold 8 at any time. Just hang up and call back in if 9 10 you need to go away for a brief bit. Much thanks, and, Mark, it is all 11 12 yours. 13 CHAIRMAN GRIFFON: Thanks, Ted. Yes, this is Mark Griffon, and I 14 15 just wanted to start off the meeting with a 16 couple of statements, and then we will get into the report that was submitted by NIOSH. 17 I think one thing I wanted to say 18 19 up front was that this is -- it is our Rocky Flats Work Group. We are not looking at the 20 SEC evaluation anymore. We have made our 21 determination, we have sent our letters in on 22 **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W. WASHINGTON, D.C. 20005-3701

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1 the -- establishing the SEC.

2	The narrow focus here and I
3	think this is important for our discussions
4	for the next little while was to evaluate
5	the Ruttenber database for impact on the Rocky
6	Flats SEC eligibility, and that was that
7	was really what we were totally focused on
8	here, not expanding or having the discussions
9	again about the SEC. So I just wanted to
10	clarify that up front for all that are on the
11	line.
12	One little administrative thing I
13	wanted to say. I have I don't think the
14	website says this, but I have to be off the
15	call by noon, so but I think that gives us
16	plenty of time to get an overview on this and
17	have some discussion.
18	So my intent for this call was to
19	have NIOSH give an overview of the report, to
20	have, then, an opportunity for some questions.
21	I will say that Terrie Barrie emailed me a
22	question that she would like read into the

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record, so I will do that for Terrie, but then other questions from other work group members would be fine there, and then, if there's questions from the public. And then, I think we might want to talk about next steps at the end of the call.

I assume Brant would be giving the 7 overview on the report -- if I can ask you to 8 sort of give a -- I guess what I am looking 9 for is like a reduced, condensed version of 10 11 the entire report, you know, just the 12 objective of your comparison, the methods you 13 used, and sort of the bottom line, what -- you know, how does this impact the potential 14 15 eligibility for the class?

I don't think we need the whole history and the timeline, if people want to get into that, or if we want to -- you know, going forward people may want to look at that and have some questions on that. But I am not sure -- just at least as a first step if you can keep it narrowly focused on the objective,

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the methods you used to determine it, and then 1 2 what your conclusions were, that would be I 3 think helpful, especially in a short time phone call. 4 5 Is that all right, Brant? б DR. ULSH: Sure, Mark. No 7 problem. All right. 8 CHAIRMAN GRIFFON: With that, I will turn it over to you, unless 9 10 other people have questions on the agenda before we --11 12 BOLLER: MS. Was Margaret 13 Ruttenber going to be on this call? CHAIRMAN GRIFFON: I don't know. 14 15 I didn't hear her acknowledge herself, so I'm 16 assuming she -- well, I'm not sure. I haven't heard anything from her. 17 This 18 MR. ELLIOTT: is Larry 19 Elliott. I sent her a copy of the report and 20 notified her of the conference call this morning. But I don't know if she is intending 21 22 to participate or not. **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W.

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1 MS. BOLLER: Okay. All right. 2 Thanks, Larry. 3 CHAIRMAN GRIFFON: Okay. I quess I will turn it over to you. Thanks. 4 5 Well, this is DR. ULSH: Okay. б Brant Ulsh. The reason -- as Mark mentioned, 7 the reason that we are meeting this morning is to discuss to what extent the epidemiological 8 studies conducted Jim 9 by and Margaret 10 Ruttenber, whether they are similar to the neutron dose reconstruction project, which I 11 12 will refer to as the NDRP, or to what extent 13 they might be different, and how that might impact eligibility for the Rocky Flats SEC 14 15 cohort. 16 One idea that was circulated and there was a lot of concern about, is that 17 these studies, the Ruttenber studies and the 18 19 NDRP, rely on different records, and they are 20 totally distinct datasets. And that is a misconception. 21 22 There was a lot of overlap. Both **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W.

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programs grew out of the former medical monitoring program conducted at Rocky Flats. And, in fact, Jim Ruttenber even served on the Advisory Board of the NDRP. So, as you might imagine, there is a lot of overlap.

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б But they both started -- both the Ruttenber studies and the NDRP started from 7 the dosimetry records that were provided by 8 the radiation protection staff at Rocky Flats. 9 10 The difference here is that the Ruttenbers only had access to total penetrating dose. 11 So 12 if you think of a pie chart, and the pie 13 represents total penetrating dose, it is how you slice that pie into gamma and neutron 14 15 components that is the question at issue.

16 And the Ruttenbers clearly expressed their preference to use the NDRP 17 18 results. However, the NDRP was not finished 19 in time for them to use them in their epi 20 it is studies. And these are -- I mean, stated clearly in the Ruttenber reports that 21 they would prefer to use the NDRP. 22

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1	But in the absence of that, they
2	had to devise some methods for splitting the
3	dose into gamma and neutron components. And
4	to do that, they rely they consulted with
5	the staff of the NDRP and devised some rules
6	of thumb to determine how to split up that
7	total penetrating dose. They did this based
8	on job types, and they did it based on what
9	buildings workers worked in.
10	Now, another thing to note here
11	and it might be different from what you've
12	heard is that there is no disagreement
13	between the Ruttenber studies and the NDRP
14	regarding which buildings presented neutron
15	exposure potential.
16	So what the Ruttenber team, the
17	Colorado Department of Public Health and
18	Environment team, did was they assigned
19	neutron doses to all members of a job type, if
20	any member of that job type could have been
21	exposed to neutrons.
22	So, for instance, if there was a
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tool engineer who worked in Building 771 and could have been exposed, well, then, all tool engineers were assigned a neutron dose.

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Now, the difference here is that 4 the NDRP relied on primary dosimetry records, 5 б so they went back and they pulled the 7 worksheets that were performed -- that were prepared when the films were read, and they 8 also reread the neutron films. So these are 9 10 primary dosimetry records, and they relied on that -- the reread films -- to determine 11 12 neutron exposure potential for the individuals 13 that work at Rocky Flats.

So that difference in the way that neutron doses were assigned led the Ruttenber studies to assign about 4,000 -- neutron dose to about 4,000 more people than the NDRP did. So given that, what we did is we looked at the impact.

20 We kind of asked the question: 21 what would happen if the Ruttenber database 22 were used to determine eligibility for the

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Rocky Flats SEC cohort in addition to the NDRP that we already use? And we also already use the dosimetry files prepared and provided to us by the Department of Energy.

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5 So to conduct that analysis, since 6 we have the dosimetry -- complete dosimetry 7 records for all NIOSH claimants, we identified 8 the current claimants that are not members of 9 the SEC class, but they -- they are not part 10 of the NDRP, but the Ruttenbers did assign a 11 positive neutron dose during an SEC year.

looked 12 And through those we 13 records, and we found no evidence that would suggest neutron exposure. And, furthermore, 14 15 we applied the criteria that are used to 16 determine SEC eligibility, so things like, do you have an SEC cancer for instance, or did 17 you work more than 250 days, you know, all the 18 19 criteria that are applied to an SEC.

20 And what we found was that there 21 would only be one person out of the current 22 NIOSH claimants that would be added to the SEC

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if the Ruttenber data were used in addition to 1 the NDRP. So the idea that there would be 2 thousands of people added to the SEC is simply 3 well, quite frankly, 4 _ _ it is just not 5 accurate. б So those were kind of the main 7 points of our report, and I would be happy to expand on any, Mark, if you have questions. 8 CHAIRMAN GRIFFON: Okay. I think 9 10 one of the first questions was -- and this actually was expressed by Terrie Barrie -- did 11 12 Margaret Ruttenber have a chance to comment on 13 this report? ELLIOTT: This is 14 MR. Larry 15 Elliott. I will answer that. No. She saw 16 the report perhaps this morning. We didn't offer her an opportunity to comment 17 and review. 18 19 CHAIRMAN GRIFFON: Okay. That was 20 one question. I would ask about these 21 _ _ the 4,000 -- this number of 4,000, Brant. 22 How **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W.

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1	many people are in the NDRP? How many
2	individuals are identified in the NDRP that
3	have an exposure to neutron?
4	DR. ULSH: You know, Mark, I don't
5	have that number at my fingertips. Mutty, do
6	you have an idea?
7	MR. SHARFI: I mean, I could look
8	it up real quick, but I don't have it off the
9	top of my head.
10	DR. ULSH: Okay. Mark, how about
11	if we answer your next question, and Mutty
12	will look while
13	CHAIRMAN GRIFFON: From the 4,000
14	standpoint, this I think 4,163 was the
15	number in the report with some assigned
16	neutron dose. I guess, you know, I think one
17	follow-up question might be we are eventually
18	probably going to want to see some of the data
19	files that you used to put together the
20	report.
21	But these were and I agree in
22	the characterization I mean, the Ruttenbers
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1 did use job information and a building, you 2 the NDRP just with know, whereas was а 3 building -- I do remember that discussion, even when we were out there in Colorado, I was 4 out there with you. 5 б But I -- I thought it was a little more complex than if one -- if one -- I forget 7 what you said, tool mechanic or whatever, was 8 in 771, and they just assigned it to all -- I 9 mean, I thought there was a little more -- a 10 little more complicated of a model than that. 11 12 Am I wrong about that, Brant? 13 DR. ULSH: I think so, Mark. Well, I don't want to say that you are wrong, 14 15 but it is just a little more complicated than 16 that. In other words, they used ratios to split up the total penetrating dose, and those 17 ratios were building-dependent, just as the 18 19 NDRP was. And those ratios were provided by the staff working on the NDRP. They provided 20 those ratios to the Ruttenbers. 21 22 is true, Mark, that they So it

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1	looked in a little more detail about, you
2	know, if you were in, for instance, Building
3	771 they used one ratio, but if you were in a
4	different building they used a different
5	ratio. But in terms of actually who was
6	applied neutron dose, I believe that that's
7	the way they did it, that they simply applied
8	you know, they based it on job category.
9	CHAIRMAN GRIFFON: Just on job
10	category regardless of the potential for
11	neutron exposure. They just said, this job
12	we found one case of this job that had a
13	potential, and, therefore, we are going to say
14	anybody with that job title had the potential?
15	DR. ULSH: I believe that is the
16	case.
17	CHAIRMAN GRIFFON: Okay, I wasn't
18	clear on that. And then, let me just follow-
19	up with one, and then I will open it up to
20	either SC&A or other work group members, if
21	they have other questions.
22	But the 100 people that you
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1	reviewed, can you explain a little bit more on
2	just a little more on so these were 100
3	of your existing claims, these were of
4	the if you had the whole list of claimants
5	that you have in your system, you identified
6	100 that were not in the Ruttenber or were
7	not in NDRP but were in the Ruttenber
8	database? Am I characterizing that correctly
9	or no?
10	DR. ULSH: Yes, pretty close. Of
11	those 4,000-plus people who the Ruttenbers
12	assigned neutron dose to, but the NDRP did
13	not, we identified which ones were claimants.
14	And the reason that we focused on claimants
15	is because we had access to their complete
16	dosimetry file.
17	So out of that 4,000 people, 100
18	of them are current claimants. So that is the
19	that is the population that we examined in
20	detail, because we had access to all of their
21	records.
22	CHAIRMAN GRIFFON: And did you
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examine all of the 100, or did you triage it first? I am a little confused, because you seemed to drop off the cases that were -- that were non-listed cancers, which, you know, is pretty irrelevant for establishing exposure.

DR. ULSH: Well, okay, the goal of our analysis, Mark, was to determine what impact on the SEC that adding the Ruttenber as a source data would have had. So you are correct that we did do the triage first.

So, for instance, if a person had 11 prostate cancer, which is a non-SEC cancer, we 12 13 triaged that. Or if they didn't meet the other criteria for the SEC, that was triaged. 14 15 Or, for instance, if they are already a 16 member of the SEC class -- and I think there were about 50 of the 100 that were already in 17 the SEC -- so those were triaged out, because 18 19 the addition of the Ruttenber data would not 20 have any impact on whether or not they are included in the SEC. 21

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CHAIRMAN GRIFFON: However, they

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1 already -- can you explain that, too, Brant, 2 how were those people in -- or in the SEC 3 without being in the NDRP? What was the other criteria that tripped them into the SEC? 4 DR. ULSH: Well, we would have to 5 б look at each case in detail. However, Ι 7 suspect -- now let's keep in mind how these cohorts were constructed. First of all, if 8 you were a member of the NDRP, if you were 9 10 considered in the NDRP, you were considered monitored 11 should have been for was or 12 neutrons, and you would be eligible, assuming 13 you met all of the other criteria. CHAIRMAN GRIFFON: All right. 14 But recall that it was 15 DR. ULSH: 16 decided that work in Building 881 would qualify for addition into the SEC. Now that 17 would not qualify you for entry into the NDRP. 18 19 So basically what we have done is we have taken all of the people who were 20

21 actually working in a plutonium building or a 22 neutron building and they're in, and then, of

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1	the remainder of the people, essentially work
2	in the largest remaining building, building
3	881, has also been added.
4	So I think I would it is my
5	very strong suspicion that that is how many of
б	those 50 people were already included in the
7	SEC because they had worked in Building 881.
8	CHAIRMAN GRIFFON: But wouldn't it
9	have been more informative to look at the 100
10	out of the 4,163, to look at, them, totally,
11	because, I mean, I understand I understand
12	the claims process. But we are looking at
13	special exposure cohort here, and the
14	eligibility to be in the class, you know, that
15	is I mean, you know, we don't know going
16	forward who is going to get what type of
17	cancer.
18	So, you know, if we want to know
19	how you know, if this database serves us in
20	any way in determining eligibility for future
21	claims, I would be interested to know even
22	though these 50 were already included, you
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know, if you examined them and you found -you know, it would be of interest to me anyway to see why those names were in the Ruttenber database and not in the -- you know, look at the original neutron records and see what you find.

Well, Mark, given the 7 DR. ULSH: level of interest in determining eligibility 8 for the SEC class, that being the primary 9 focused very closely 10 interest, we to the this would 11 impact that have SEC on 12 eligibility. So, yes, sure we could go back 13 and look at all 100 people. But the report wouldn't have been presented to you now. 14 Ιt 15 would have taken a few more months to -- I 16 mean, to look at that.

17 CHAIRMAN GRIFFON: I guess that is 18 what I am focused on, too, is eligibility, not 19 -- I think we are -- I mean, I might be not 20 making my point very well, but, you know, the 21 idea -- I mean, if we are just looking at this 22 as a sample rather than as -- strictly as

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specific claims files, let's say this is a sampling of 100 people that we just have -happen to have access to their raw records, so we are going to use that to make judgments about the -- you know, the entirety of the database.

7 Then Ι would say you need to examine the entire sample, not just those that 8 you have already, you know, either disposed of 9 10 in a separate manner through the SEC process or you have excluded for -- because 11 they 12 didn't have the correct type of cancer. Do 13 you understand what I mean?

I do understand what ULSH: 14 DR. 15 you are saying. But, you know, I am going to 16 defer to Larry on that in terms of dedicating However, but I would say to you 17 resources. that we focused on the important question, and 18 19 that is, for whom would this make a difference 20 in terms of being in the SEC or not? And that was only one person. 21

DR. NETON: Mark, this is Jim.

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1 I've got a sense that maybe we are going off 2 the track here, though. It is not would more 3 people be in the SEC if we used the Ruttenber data, but which dataset really appeared to be 4 a more representative set of people who are 5 б neutron exposed. I mean, I don't -- you know, 7 I understand that --CHAIRMAN GRIFFON: Well, we've --8

9 I mean, you may disagree with this, Jim, but I 10 think the Board has already determined that, 11 you know, we have got concerns about the NDRP 12 data and the use for -- you know, that's why 13 the recommendation went out to the Secretary.

14 DR. NETON: But not necessarily 15 NDRP data reconstruction itself, but 16 identification of those who were neutron exposed, the way the process was --17

18 CHAIRMAN GRIFFON: Right. Right,
19 right. Okay.
20 DR. NETON: -- performed.
21 CHAIRMAN GRIFFON: All right.

22 || Well, I --

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1	DR. NETON: I think that is a
2	different issue, and, you know, Brant outlined
3	in the report, I think in some detail, why the
4	NDRP, which went back and pulled 90,000
5	people's records and reanalyzed them in
6	detail, and the Ruttenber study actually
7	states that that would be a more
8	representative set. And why go back, then,
9	and reconstruct history based on a more what I
10	would consider obsolete dataset is sort of
11	questionable, but
12	CHAIRMAN GRIFFON: Well, yes, and
13	I don't want to reconstruct the dataset. I'm
14	more interested, like you, Jim, in answering
15	that question of
16	DR. NETON: But, I mean, the
17	central question is
18	CHAIRMAN GRIFFON: Which one is
19	more complete in identifying people, you know,
20	who could have been exposed to neutrons? And
21	I will go back to my one example that I have
22	used throughout this debate is, you know, the
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1 maintenance person in the non-neutron building 2 who got sent into other buildings to do work, 3 you know, that hypothetical example or maybe it is a more real example. 4 But for this purpose, for me it is a hypothetical example. 5 б You know, this is where, you know, the use of 7 job title might have been important if it was done -- you know, and, again, that's why we 8 set out this task. 9 10 DR. ULSH: Okay. There's a couple 11 points to make on that issue, Mark. We are 12 talking about roving workers here, and this has been asked --13 CHAIRMAN GRIFFON: 14 Yes. 15 DR. ULSH: several times ___ 16 before. So just for people who are on the call who may not be as familiar with what we 17 18 are talking about here, rovers are people that 19 were stationed, officially stationed at least, 20 in a non-neutron building, but occasionally their work took them into neutron buildings. 21 22 And so the concern here is, were **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W.

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1 those people captured in the NDRP? So if I 2 could, here is what the NDRP says about it. 3 small portion of the total number "A of 4 neutron worksheets represent the issuance of neutron dosimeters to a few personnel whose 5 б home building assignments were the non-7 plutonium production building, such as Buildings 21, 22, 23, 34, 44, 81, and 86. 8 "These individuals primarily 9 10 worked in non-neutron buildings but were routinely issued neutron dosimeters because 11 they occasionally performed work activities in 12 13 plutonium production buildings. Some examples of these job descriptions 14 are guards, 15 radiation monitors, technical researchers, and 16 uranium process operators." 17 So what Ι can present to you, 18 again, is that the NDRP captured these people. 19 Now can I prove the negative, that there is who somebody onsite fits into 20 not this category that the NDRP did not capture? 21 Well,

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it is not possible to prove a negative, but we

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have evidence that they made an effort to capture these people, and we have seen no evidence that people are missing, people that fit this category were not captured. So that is all I can do now, and that is really all I am ever going to be able to do.

7 CHAIRMAN GRIFFON: The only have is the 4,163 8 evidence we additional people in the Ruttenber database. 9 And if you are calculating it accurately, that number is 10 vastly too high. I mean, if it was simply 11 12 done on job title, I mean, in talking with 13 Margaret, I got the sense that it was a little -- it scrutinized a little further than just 14 15 simply job -- it wasn't just any maintenance 16 mechanic, but they tried to determine if it was maintenance mechanics that would have gone 17 into other buildings or things like that, but 18 19 maybe I am wrong on that. But, you know --20 Well, I can tell you DR. ULSH: that they did use rules of thumb. 21 That was confirmed to me both in some of the meeting 22

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minutes that Margaret provided. It was also confirmed to me by Roger Falk, who gave them the rules of thumb. And that is what they

Now, with regard to -- I think Jim is right here that we are kind of focusing on an important question, but maybe not the main question, and that is, which would be the most reliable for determining who would then be -who was neutron exposed.

So if you consider the fact that 11 12 the Ruttenbers -- and keep in mind I am not 13 criticizing what the Ruttenbers did. I think they did an admirable job with the data that 14 15 they had at the time. It's just that they 16 didn't have access to all of the data that the NDRP did. 17

And it mystifies me why anyone would try to make the case that the NDRP is not acceptable when they reread the films and went back to primary dosimetry results. And the Ruttenber data didn't have access to that,

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used.

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1	and they had to simply apply rules of thumb.
2	So I can't see that I can only
3	
4	CHAIRMAN GRIFFON: Yes, I I
5	think Arjun has a follow-up question.
6	DR. MAKHIJANI: Yes. Is everybody
7	in the NDRP have a badge and their badges were
8	reread, it was my impression, at least in the
9	early years, most of the people who had
10	potential for neutron exposure were not
11	badged. And so like the Ruttenber database,
12	their total dose was split by N/P ratio. It
13	didn't seem to me like the you know, there
14	were 700 buildings where people did not have
15	badges because people didn't realize it was a
16	high neutron area.
17	DR. ULSH: No, that's not quite
18	accurate. Parts of that are accurate, but
19	parts are not. It is true that in the early
20	
21	DR. MAKHIJANI: have a neutron
22	badge in neutron buildings that we recognize
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1 now? 2 DR. ULSH: Okay. It is true that 3 in the early years they limited badging to those that were considered the most highly 4 5 exposed. б DR. MAKHIJANI: That's right. 7 DR. ULSH: Now --MAKHIJANI: 8 DR. But my actual question -- you made a statement that the NDRP 9 10 -- it consists of people whose badges were 11 reread. And what Ι what am my 12 understanding is, that the NDRP also includes 13 people who did not have badges and whose doses are estimated only by N/P ratio, at least in 14 15 certain years. 16 DR. ULSH: That is --DR. MAKHIJANI: Is that correct? 17 No, it is not just like 18 DR. ULSH: 19 the Ruttenber database. They had --20 No, the N/P --DR. MAKHIJANI: -- they had a -- well, DR. ULSH: 21 22 let me answer your question. Let me answer **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W. WASHINGTON, D.C. 20005-3701

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1 your question. The answer is -- how did you 2 get into the NDRP? And the answer is if you 3 were issued neutron dosimetry or even if you did not have neutron dosimetry, if you had 4 beta-gamma monitoring in a neutron building. 5 б So, yes, it is true that there are 7 numerous people -- I don't know how many, I would have to look -- who did not have neutron 8 badges, but they are in the NDRP anyway. 9 And 10 by that, they are already in the SEC class. Well, you had to 11 DR. MAKHIJANI: 12 do the same thing in the NDRP for people who 13 did not have neutron doses, but beta-gamma dosimetry. They had the full pie, but you 14 15 couldn't break it up. And so they had to use 16 N/P ratios for those people, which is --DR. ULSH: That is correct. 17 -- which is the 18 DR. MAKHIJANI: 19 method -- so I think the initial part of the 20 record indicated that NDRP consists of people with reread badges, and the neutron doses in 21 22 the Ruttenber database are N/P ratios is **NEAL R. GROSS**

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inaccurate. The NDRP actually consists of --1 2 MR. SHARFI: Let me clarify. This 3 is Mutty Sharfi. Actually, Ruttenber split the penetrating dose, where the NDRP actually 4 took the gamma dose and calculated neutron 5 б dose. Those are two different things. Well, I need to 7 DR. MAKHIJANI: know how this splitting was done. I am just 8 -- I just want to make a point --9 10 MR. SHARFI: The NDRP did no splitting --11 NETON: 12 Time out. This DR. is 13 Jim. I think, Arjun, that the issue here is not the reliability of the dose calculation 14 for neutron. The issue is --15 16 DR. MAKHIJANI: Well, a lot of that has been inferred in the report. 17 18 DR. NETON: No, no, no. 19 DR. MAKHIJANI: And your report is 20 about which methods were more accurate for dose reconstruction, whether it was N/P ratios 21 or rereading the badges and --22 **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W. (202) 234-4433 WASHINGTON, D.C. 20005-3701 www.nealrgross.com

1 DR. NETON: I think that is а 2 misconception of the report. The report 3 was --Well, then why go 4 DR. MAKHIJANI: into whether the Ruttenber study used --5 б CHAIRMAN GRIFFON: All right. Let 7 Jim Neton speak, please. I would 8 DR. NETON: Yes. iust like to say that the report is really more 9 10 about who was potentially neutron exposed, not how accurate the neutron dose reconstruction 11 12 is, because anybody with neutron exposures is 13 in the -- is in the class already. The question is did the NDRP identify properly all 14 15 workers who were potentially exposed to 16 neutrons? And as Brant indicated, in those 17 18 years when neutrons weren't monitored, they 19 assigned a neutron dose to workers who had 20 beta-gamma badges in neutron buildings. So they were identified as potentially neutron 21 22 workers based on having worn a beta-gamma **NEAL R. GROSS**

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1 badge in a neutron building. 2 (Simultaneous speakers.) 3 DR. MAKHIJANI: Are there people in the SEC class now who are not in the NDRP? 4 5 DR. ULSH: Yes. Yes, there are. б There are a number of them. Then it is true 7 DR. MAKHIJANI: that the NDRP is incomplete in that regard. 8 That is absolutely not DR. ULSH: 9 The reason those additional people are 10 true. in the SEC class was because they worked in 11 12 Building 881. 13 DR. MAKHIJANI: Well, that is has got to be NDRP. 14 15 CHAIRMAN GRIFFON: That was а 16 Board decision, Arjun. DR. MAKHIJANI: No. 17 It was a DOL determination. 18 19 CHAIRMAN GRIFFON: Yes, yes. 20 DR. ULSH: There are a number of people who are in the SEC class by virtue of 21 22 the fact that they worked in Building 881. NEAL R. GROSS COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W. (202) 234-4433 WASHINGTON, D.C. 20005-3701 www.nealrgross.com

1	However, we looked at those people, and there
2	is no independent indication in their file
3	that they were exposed to neutrons.
4	DR. MAKHIJANI: So you are saying
5	they are wrongly in the SEC class?
6	DR. ULSH: They are consistent
7	with the criteria that have been established
8	by DOL for entry into the class, and that is
9	Building 881. That is a settled issue.
10	DR. MAKHIJANI: No, it's a
11	technical question relating to who is eligible
12	to be in the SEC class and what the
13	uncertainties are, which is what I am trying
14	to understand, because in this conversation
15	the NDRP is being represented as complete for
16	those who were exposed to neutrons. But it is
17	a fact that there are a significant number of
18	people, including 50 out of the 100 that you
19	looked at were not in the NDRP, who are in the
20	SEC class even though they are not in the
21	NDRP.
22	DR. ULSH: That is correct.
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1 DR. MAKHIJANI: The NDRP cannot be 2 defined currently, as the SEC stands, as 3 representing completely those who are eligible to be in the class, in my opinion. 4 5 DR. ULSH: I never represented it б as such. I clearly explained that DOL decided 7 to add work in Building 881 as entry -- as a criterion for entry into the class. 8 Those people are not necessarily into -- they are 9 10 not in the NDRP unless they worked in a neutron building, as defined by both NDRP and 11 12 the Ruttenber study. 13 DR. MAKHIJANI: So DOL did wrong by adding them? That's what I'm trying to 14 15 understand. 16 DR. ULSH: I'm not going to answer that question because it is 17 not in my 18 authority to answer that question. DOL has 19 the responsibility and the authority to 20 determine how they will administer the class. They decided that work in Building 881 21 qualified, and so those people are in. 22

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1	DR. MAURO: Brant, this is John
2	Mauro. I have a question, and it's really for
3	my I'm listening to the conversation. Am I
4	correct in understanding that right now the
5	real issue that is before us is that there are
6	4,000 or so people who are not currently
7	within the circle that is under consideration
8	for SEC treatment, within that group, is that
9	correct?
10	DR. ULSH: Not quite. There are
11	4,000 or so people who are assigned neutron
12	dose in the Ruttenber database, but who are
13	not assigned neutron dose in the NDRP.
14	DR. MAURO: Okay. Now
15	DR. ULSH: Now, a number of those
16	people would most likely qualify just like the
17	representative sample that we looked at.
18	DR. MAURO: I don't want to go
19	there yet. I understand that, but I am taking
20	baby steps right now. Okay. So what we have
21	is 4,000 people, whether or not now, what
22	I'm asking is, do you agree that those 4,000
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1 people are people that have the potential for 2 neutron exposures but are currently not under 3 consideration to be included within the cohort? 4 5 DR. ULSH: No, I don't. б DR. MAURO: Okay. Because that's 7 what Т hear is the essence of this 8 conversation. DR. ULSH: There are 4,000 9 Sure. 10 people that the Ruttenbers assigned neutron dose to. We have not done a detailed analysis 11 12 of all 4,000. That would take several years. 13 But I would have to look at their dosimetry files and see whether there was evidence of 14 15 neutron exposure or if there was evidence of 16 work in Building 881, which is also а criteria. 17 Good. 18 DR. MAURO: So we've got 19 4,000 people that are sort of in limbo right 20 What I mean by that is that we have a now. group of 90,000 -- I heard a number like that 21 -- which is currently under consideration, you 22 **NEAL R. GROSS**

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1 know, for possible assignment of compensation 2 claims under the SEC. And there are these 3 4,000 people that do not appear to be within that circle, whether or not one or any of them 4 would actually be compensated, but is there 5 б agreement that they did have the potential for 7 neutron exposures but are currently not part of consideration within the cohort? 8 There is not 9 DR. ULSH: No. 10 agreement on that point. 11 DR. MAURO: Okay. I would say to you that 12 DR. ULSH: 13 they would -- they simply were imputed neutron doses by the Ruttenbers based on the criteria 14 that they used. We would have -- since they 15 16 did that based on job classes without really evidence of work in a neutron building, I 17 18 would say to you that for each of those 4,000, 19 should they ever file claims, we would have to 20 bounce that against the SEC criteria and determine whether they are in or not. 21 22 I can't tell you that every one of **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS

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1 those 4,000 had neutron exposure potential. Ι 2 would do the same thing I did with these 100 3 cases that we looked at in detail. DR. MAURO: So that is the essence 4 5 of the disagreement, namely 4,000 people have б been named, but there is no -- the level of --7 the threshold of evidence that, yes, these should within the 8 people be cohort automatically is not there. That would have 9 10 to be dealt with on a case-by-case basis. 11 DR. ULSH: I would say so, yes. 12 DR. NETON: John, this is Jim. Ι 13 would also like to point out something which I think is fairly important. The definition of 14 15 the class, I believe, is those who were 16 monitored or should have been monitored for By definition, these 17 exposures to neutrons. 18 4,000 people or whatever there were, were not 19 monitored for neutron exposures. And their 20 doses were assumed and imputed by the Ruttenber study based job title 21 on some information. 22

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1	I think Brant could back this up.
2	I think it is true, though, that the vast
3	majority of those workers would have received
4	far less than 100 millirem imputed neutron
5	dose, which was the criteria the threshold
6	criteria established by the Department of
7	Labor for most classes, or all classes where
8	the definition of "should have been monitored"
9	came into play.
10	CHAIRMAN GRIFFON: I was hoping we
11	wouldn't get to the 100 millirem
12	(Simultaneous speakers.)
13	DR. NETON: I'm just saying that
14	these people were not monitored at all for
15	neutron exposure. Should they have been
16	monitored is the question. And I think
17	Brant's report clearly outlines that, based on
18	the NDRP study, they should not have been
19	monitored.
20	CHAIRMAN GRIFFON: Yes. If you're
21	referring to this gets tangled around a
22	little bit, but if you are if you're
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referring to DOL, Jim, then 881, they should 1 2 have been monitored for neutrons. So --3 DR. NETON: We did not make that determination. Department of Labor did. 4 And. frankly, this is -- this report provides, as 5 б best we can -- portrays the evidence of what 7 was available for NDRP versus the Ruttenber. And, frankly, you know, the report stands on 8 its own merit, and people can use it to make 9 determinations as they see fit. But we do not 10 make that determination of who was in the 11 class. 12 Well, I think 13 CHAIRMAN GRIFFON: -- well, I don't want to drag on too long with 14 15 this because I think -- Jim, it would be nice 16 if we could see the -- like I'm sure you use spreadsheets to put these names and numbers 17 together and stuff, because I'm still a little 18 19 unclear, especially on the 100, how many case 20 files you actually went into and -- I don't want to, you know, try to get into it over the 21 phone without looking -- you know, it might 22

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1	just be easier to look at, but that might be
2	one follow-up item that I would ask for anyway
3	is the analysis files.
4	Go ahead. Who was trying to
5	speak?
6	DR. MAKHIJANI: Mark, it seems to
7	me from the report and Brant might confirm
8	if this is right or wrong he said that they
9	looked at 100 cases in detail. But as I read
10	the report, only two of them were examined for
11	neutron exposure.
12	CHAIRMAN GRIFFON: No, that's not
13	accurate.
14	DR. MAKHIJANI: From this triage,
15	the 50 were not examined because they were in
16	the SEC, 22 because they had non-SEC cancers.
17	Some were less than 250 days. Four at PoC
18	greater than 50 were compensated already, and
19	so on.
20	CHAIRMAN GRIFFON: Let Brant
21	respond to that.
22	DR. MAKHIJANI: I don't know how
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1 many -- how many neutron exposure potential 2 investigations were done out of these 100 3 cases. DR. ULSH: I don't know. I would 4 5 have to go back and look at our spreadsheets б to see that. But it is true that --Well, that is 7 CHAIRMAN GRIFFON: what we would like to look at, too, Brant, if 8 we could. 9 10 DR. ULSH: Sure. That's no 11 problem. 12 DR. MAURO: Before we move on -this is John Mauro --13 CHAIRMAN GRIFFON: Go ahead. 14 15 Brant was trying to finish. I'm sorry. 16 DR. MAURO: I'm sorry. COURT REPORTER: 17 Excuse me. This is the Court Reporter. 18 Hello. Could 19 people please remember to identify themselves 20 before they speak? I had trouble keeping track of the last bit of conversation. 21 22 And as long as he is MR. KATZ: **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W. (202) 234-4433 WASHINGTON, D.C. 20005-3701 www.nealrgross.com

piping in on that point, I would just ask 1 2 everybody to please -- I know everybody has 3 something to say, but please try to let each person finish what they are saying before you 4 -- before you come with your comment. 5 б Thanks. 7 CHAIRMAN GRIFFON: Yes. And this is Mark Griffon, and I just cut Brant off. 8 Sorry, Brant, I will let you finish your --9 10 DR. ULSH: No, that's no problem, consider of the detailed 11 Mark. Ι part 12 analysis, we started at 100, and those are the people for whom at 13 least in theory the Ruttenber data could make a difference. 14 And 15 we tried to determine, based on applying all 16 of the criteria, which people it might have made a difference for. So that is where I 17 for 18 consider the line а more detailed 19 analysis. 20 Now, it is true that we did do the triage, as I described before. If it couldn't 21 possibly make a difference, we simply focused 22

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people where it could 1 on the make а 2 So, yes, I mean, I can -- it is difference. 3 easy enough to provide you the spreadsheets that back this up, and you all have access to 4 And if you'd like to do whatever looks 5 NOCTS. б you want to, then that's fine, but --7 CHAIRMAN GRIFFON: Yes, that would be helpful, Brant. 8 trying 9 DR. MAKHIJANI: I'm to 10 understand the meaning of the term "could make difference." 11 For there а me, are two completely different meanings. 12 13 DR. ULSH: Okay. DR. MAKHIJANI: is 14 One they 15 already had a cancer and could be eligible for 16 compensation if they were in the SEC class. The other is, did they have potential for 17 neutron exposure, whether they have a cancer 18 19 or not, whether they are a claimant or not, 20 which is, in my understanding, the definition of who is eligible to be in the class. 21 22 And so from that point of view, **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W.

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all of these 100 claims potentially could --1 2 100 people could be in the SEC class. And I 3 agree with what Mark said earlier, in that if you look at these 100 claims as a sample of 4 the 4,163, perhaps not random, but, as I said, 5 б at least as a sample, then you could get an idea of how many of these 4,163 have potential 7 8 for neutron exposure. Obviously, 50 of them are already 9 10 in the SEC class, so by that definition I would say on the face of the analysis that is 11 already done, 50 of these 100 people who are 12 13 not in the NDRP are eligible to be in the SEC class because they are already in it. 14 15 DR. ULSH: Okay. That was Arjun 16 Makhijani, by the way. This is Brant Ulsh. Arjun, you asked a specific question about 17 what I mean when I say "for whom it could make 18 19 difference," and let me give а you а definition. 20 If someone is already in the SEC 21 class -- in other words, out of that group of 22

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100, 50 of them are already in the SEC class, 1 2 if we add the Ruttenber data as another 3 criterion, it is not going to make one whit of difference for them because they are already 4 5 You can't get in twice. They could have in. rem of б one rem, 10 rem, 1,000 neutron 7 exposure, and it will not make a single bit of difference for them because they are already 8 in the SEC class. 9 10 DR. MAKHIJANI: No, no. I --Similarly, if -- no, 11 DR. ULSH: 12 let me finish, please. Similarly, if they 13 have already been exposed, if they have already compensated due dose 14 been to 15 reconstruction, it will not make a single bit 16 of difference. So -- and it is true that DOL expanded the criteria for entry into the SEC 17 class to add work in Building 881. 18 19 Now there is no reason for us to 20 think -- there is no evidence to suggest that the patterns that we observed in the 100 that 21 we looked at in detail, that that would be any 22

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different if we looked at all 4,100. So that is why -- that is what I mean when I say "for whom it would make a difference." It is, "will it make a difference in the compensation decision for those people?"

б DR. MAKHIJANI: Yes, that is what 7 I am struggling with for the question of eligibility for the SEC class. If you ignore 8 the fact that they are claimants, and the 9 10 outcome of their cases, and just look at this as a sample of the 4,163 as a technical and 11 12 statistical question, then you would find that 13 50 of the people who are not in the NDRP but are in the Ruttenber database are part of the 14 15 SEC class already, as it has been determined.

16 So my -- and then, one may be by So at this your additional investigation. 17 stage, I think, based on the investigations, 18 19 one would say that if one took a sample of the 20 4,163, one would find, by current criteria, that 51 percent of them would be in the SEC 21 22 class. Is that wrong?

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1	DR. ULSH: Yes, because of the
2	expanded criteria that DOL uses for entry into
3	the class.
4	DR. MAKHIJANI: Okay. So then
5	DR. ULSH: Fifty of the 100 are
6	already in the SEC.
7	DR. MAKHIJANI: Yes. So, but they
8	are not in the NDRP.
9	DR. ULSH: That is correct.
10	DR. MAKHIJANI: So out of the
11	4,163, we might find more than 2,000 people
12	who are eligible for the SEC, as the analysis
13	stands now. That is my understanding of it.
14	DR. ULSH: Well, okay, if we make
15	the assumption that the 100 is represented
16	a representative sample, then by definition if
17	you scale up, half of them even if we did
18	not even if DOL decides not to use the
19	Ruttenber data as the criteria, about half of
20	those people, should they file a claim, will
21	be in the SEC class anyway.
22	DR. MAKHIJANI: But they may not
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1	be. I mean, this is this is something we
2	are inferring, where the question is, is how
3	complete is the NDRP for people to determine
4	their neutron dose potential? That is the
5	focus of a lot of your report. By the
б	criteria by the findings in the report, it
7	would appear that many of the 4,163 people who
8	are not in the NDRP did have neutron exposure
9	potential by the current SEC criteria. That
10	is the thing I am trying to
11	DR. NETON: I think that is a
12	false assumption, Arjun. This is Jim Neton.
13	You know, if you go strictly by
14	the technical merit of both reports, you can't
15	come to that conclusion. You have to reach
16	out and add in the class that the Department
17	of Labor has expanded to mean, you know, that
18	are in the SEC. That is not a valid
19	comparison when you are comparing two
20	databases.
20 21	databases. DR. MAKHIJANI: Well, I guess the
21	DR. MAKHIJANI: Well, I guess the

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people who are on the SEC class who are not on 1 2 the NDRP are wrongly in the SEC class. That 3 is --We are evaluating two 4 DR. NETON: databases, and the technical merit valuation 5 б of those two databases stands on its own 7 merit. You can't start adding in Building 881 people and say that the NDRP is wrong. 8 Because you also have 9 DR. ULSH: 10 to consider that the Ruttenber database, the studies, also did not 11 Ruttenber consider 12 Building 881 a neutron building. Regardless 13 of that, the class, as DOL has defined it, does include Building 881. 14 15 Quite frankly, my opinion of 16 whether that is a good or bad decision is completely irrelevant. DOL has determined 17 that that is a criteria for entry into the 18 19 class, and so it is. Brant, this is John 20 DR. MAURO: I have a question about --21 Mauro. 22 Well, these DR. 50 MAKHIJANI: **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W. WASHINGTON, D.C. 20005-3701

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1 were in 881, then.

2	DR. ULSH: I'm sorry, I didn't
3	catch that. What?
4	DR. MAKHIJANI: Ruttenber didn't
5	have 881 in his criteria, their criteria. So
6	these 50 cases, then, are in the SEC class
7	from the Ruttenber database, but they would
8	then probably not be in Building 881.
9	DR. ULSH: No, that's not true.
10	Ruttenber used a different way of assigning
11	neutron doses. They assigned them based on
12	job class. Now, when they listed neutron
13	buildings, they listed the exact same list
14	that the NDRP did.
15	DR. MAKHIJANI: Right.
16	DR. MAURO: Brant, what would be
17	the problem
18	DR. MAKHIJANI: I see the point.
19	DR. MAURO: with adding the
20	Ruttenber data as part of the definition of
21	the class? In other words, right now I am
22	hearing that the definition of a class is done
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in a way which identifies buildings. And by doing so, there is a high level of assurance that you have captured everyone that had the potential for neutron exposures over the time period of interest, and perhaps more.

б And what Ι am hearing, though, 7 well, there is -- you can actually expand the definition a little bit, and maybe catch a few 8 more people, if you were to include all of the 9 10 people that are in the Ruttenber database, which is another way of trying to identify 11 people with neutron exposures. It is sort of 12 13 like a Venn diagram, I think is what it's called. 14

15 But I'm hearing some resistance to 16 that, and I -- the reason I'm hearing it is that you don't believe that the -- the way in 17 which the Ruttenber data defined people with a 18 19 potential for neutron exposure was robust 20 enough to make it into the definition of the class. 21

DR. ULSH: You are on the right

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track there, John, in terms of characterizing my thinking, although I am approaching this from a different goal. I am not trying to exclude anyone from the class, and I am not trying to maximize the number of people.

б All I am saying is -- and this is 7 a purely scientific question -- what is the most scientifically robust way of the two --8 the Ruttenber or NDRP -- to decide who was 9 10 assigned -- who was exposed to neutrons? And my point is that if I am given the choice 11 between two studies, one of which relies on 12 13 primary dosimetry data, goes back and rereads the film, the actual films themselves, the 14 15 other study relies on -- it's an epi study, so 16 it's designed to do epidemiological purposes, and, quite frankly, a lot of epi studies do 17 qive the level of attention to the 18 not 19 dosimetry. They focus on other aspects that are more important for an epi study. 20

21 Furthermore, the report of the 22 Ruttenber study itself clearly indicates that

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1 the NDRP methodology is superior. It simply 2 was not available to them at the time. Given 3 the choice between the two, my conclusion is that the NDRP provides a more scientifically 4 5 robust and reliable method for determining who б was actually neutron exposed. DOL decides to add 7 Now if the Ruttenber database as a criteria for entry 8 into the class, fine, that is their decision. 9 10 I have no problem. Isn't that the essence 11 DR. MAURO: 12 talking about of what are right we now, 13 whether or not that decision is appropriate or not? 14 15 ULSH: I can't speak to the DR. 16 appropriateness of it. All I can tell you is --17 Isn't that where this 18 DR. MAURO: 19 is all taking us? I mean, in the end, we are 20 really saying, well, should we expand the definition to include the Ruttenber data? 21 22 Because maybe that is a different way of **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS

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evaluating who should be in the class.

2	But if I guess from a
3	scientific point of view, if it was reasonable
4	that, yes, that is another way to figure out
5	who might have gotten some neutron exposure,
6	well, then one would say, yes, maybe you
7	should be including that group in the class.
8	If it turns out that the way in
9	which it was done was such that it isn't as
10	robust as the method that you folks have used,
11	and, therefore, should not be one of the
12	criteria or ways in which we include people
13	within the SEC, so, I mean, it comes down to a
14	very that simple question.
15	See, you posed it as an "or." You
16	know, am I going to use Ruttenber, or am I
17	going to use NDRP? And I'm saying I say,
18	well, how come we are not using both? And
19	there has got to be an answer to if you
20	decide that both are not going to be used, you
21	are going to have to pick one, I would
22	understand why you would say, yes, maybe there

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1 is good reason -- if you are going to have to 2 pick one, we are going to go with the one you 3 picked. don't think 4 But Ι that's Ι _ _ is broader 5 think the question than that. б Perhaps you don't have to pick one; you could 7 pick both. DOL could very 8 DR. ULSH: Sure. well say, we are going to use the NDRP, and in 9 10 addition we are going to use the Ruttenber If they decide that, I mean, that is 11 data. 12 entirely within their prerogative to do so. 13 DR. MAURO: I'm sorry to jump in like this, but they are going to look to you 14 15 and ask the question, well, you know, was the 16 Ruttenber approach for identifying people with the potential for neutron exposure also a 17 18 fairly good way to do things? And, if so, 19 then I think that, you know, they are going to 20 need your help in making that decision. MR. ELLIOTT: This is 21 Larry 22 Elliott, John. And our report stops short of **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W.

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1	making a recommendation on in that regard.
2	We simply Brant and the team that has done
3	this evaluation's efforts have been
4	straightforward to try to identify, by
5	comparison, which is the most scientifically
6	robust dataset. And this report speaks to
7	that on its own merits.
8	And Department of Labor has the
9	report now. They will look into this report.
10	They may choose to examine some more of the
11	4,136 in some way. If they ask us for further
12	comment or opinion or scientific evaluation,
13	we will have to take that up if they approach
14	us with that.
15	DR. MAURO: Larry, and you know
16	what I heard is that you folks did a little
17	homework to check to see, well, what the
18	impacts might be if they did that. And your
19	indication is it is modest. And I would say,
20	well, that is really not the question at hand,
21	you know, if you were to include it, what
22	would really happen?

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1	The real question is, should it be
2	included? And I think should it be included
3	is a judgment call on whether or not there is
4	a group of people that probably should be
5	included within the class because they did
6	have a potential for neutron exposure. If
7	that judgment is to be made by Labor, then
8	that is where the judgment will lie.
9	DR. NETON: Yes, I agree, John.
10	This is Jim Neton. I mean, the report clearly
11	defines, describes, how both studies were
12	done. And Brant has described that here in
13	some detail, and it is all in there, and
14	you're right. The question is, should you
15	use one, the other, or both?
16	CHAIRMAN GRIFFON: That is the
17	question. This is Mark Griffon. I think we
18	are going to end up going around in circles a
19	little bit, so I am going to try to truncate
20	it here. I wanted to hear from other work
21	group members, if other work group members had
22	the opportunity to review this or have any
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any initial thoughts anyway. I know we haven't had a lot of time with the report.

MEMBER MUNN: This is Wanda. 3 I am 4 certainly glad to make а brief comment, although I don't think what I have to say will 5 б add anything. It is guite clear to me that an 7 enormous amount of work has been done both at the group level and individually with respect 8 to this database. And I say "this database" 9 10 rather than "these databases" because it is also fairly clear that there is good evidence 11 12 to support the work that has been done and 13 redone to identify the proper individuals for this SEC. 14

Whether we move forward with it 15 16 any further seems to be a moot point. It is very difficult to see how any additional work 17 18 could be done than has been done already. The 19 report that we have been given just last week, 20 with respect to the work that has been done by NIOSH, is clear. It, I believe, covers all of 21 the issues. 22

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1	Dr. Ulsh today has made a very
2	good summation of the findings that we have,
3	and it is difficult to see where this working
4	group and NIOSH could take this further.
5	I personally am satisfied with the
6	work that has been done. If there are
7	additional administrative decisions to be
8	made, it clearly is outside the purview of
9	this group and is in the hands of other
10	organizations.
11	MEMBER PRESLEY: This is Bob
12	Presley. I agree with that 100 percent. I
13	don't think we are going to settle anything,
14	and everything looks in good shape to me.
15	MEMBER GIBSON: Mark, this is
16	Mike. I feel it just sounds like to me
17	that SC&A still has some legitimate concerns.
18	And, you know, I think NIOSH has responded to
19	the concerns, but I don't think that
20	necessarily satisfies the concerns that they
21	have.
22	CHAIRMAN GRIFFON: Yes. And,
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1 Mike, this is Mark Griffon. I would agree 2 with that for sure. I think at the very 3 minimum I want to see, you know, the -- just to be able to go through the spreadsheets that 4 Brant referenced and he will -- he said he 5 would share them on the O: drive with us, so б that is not a problem. 7 But also, I think -- so that would 8 be one action item I would ask for out of this 9 10 meeting is to share the analysis files with us and SC&A. The second would be if we can -- I 11 12 know, Larry, you said that you sent the report 13 to Margaret. I think we need to -- because of 14 15 her relationship with the community there, I 16 think it is really important that we let -that we, you know, solicit comments from her 17 18 on this, and whether it -- you know, she is in 19 agreement with this or has, you know, some technical comments, but, you know, whatever. 20 I think we need to try to get comments from 21 22 her on the report. So at least those two

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1 actions.

2	I don't know if you Larry, do
3	you agree with that? Or Brant?
4	MEMBER MUNN: This is Wanda.
5	Before Larry or Brant answers that, did I
6	misread the report? I was of the impression
7	that an attempt had been made to obtain any
8	comment prior to the issuance of the report,
9	and there had been no response. Was I
10	incorrect?
11	CHAIRMAN GRIFFON: Well, I think
12	there was some attempt to communicate with
13	Margaret on some technical questions, and
14	then, I am not sure why, but, yes, it I
15	read that, too, Wanda, that I think it was in
16	middle May or late May where you were trying
17	to get hold of Margaret for some technical
18	questions on the database and weren't getting
19	phone calls returned. But we know she is
20	around.
21	I mean, I don't think Larry
22	said that she hasn't seen the report until
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this morning I think was what you said, Larry. And I think we should let her see the final product anyway, regardless of why she wasn't, you know, getting back to them during the process.

б MR. ELLIOTT: This is Larry 7 Elliott. And yes, Wanda, I think Mark is You are somewhat mistaken. 8 correct. The report does not say that Margaret Ruttenber 9 10 was asked for comment on the report and didn't provide that. The report says that we tried 11 12 to gain clarification and additional insight 13 from her on a few technical points, and unfortunately she was non-responsive. Mark, I 14 15 don't have a problem with you guys -- if that 16 is what the working group wants to do, to Margaret Ruttenber and 17 approach seek her comment on this report, that's fine. 18

19 CHAIRMAN GRIFFON: I think that --20 I mean, that's my position right now, Larry. 21 And I think, you know, if -- I mean, we need 22 to certainly get her to weigh in because I

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know that she has worked with a lot of the 1 2 workers out there before, and, you know, they 3 have asked if she -- Terrie very specifically put this question on the table. I think it is 4 important that we get, you know, her opinion 5 б on the report. And then, I would personally like 7 to see the analysis of it, just to understand 8 a little better, you know, of those 100 cases 9 10 and how the triage process -- I listened to it, and I think I understand it pretty well, 11 but I always like to -- it might be useful for 12 13 us to look through the spreadsheet. At this point, I mean, you know, 14 15 other than reviewing these materials that are 16 posted on the O: drive, I am not ready to say -- you know, to task SC&A with any, you know, 17 extensive further review. But, you know, I 18 19 think, you know, just at least to -- John, I

think you can, under your current task, review

data that is posted in support of this report

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sort of.

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1	But I don't want any more
2	expansive, you know, review at this point. I
3	think that if we decide to do that, that
4	has to probably that should go back to the
5	full Board anyway, so
6	DR. MAURO: No, we were not
7	planning any action other than this phone
8	call.
9	CHAIRMAN GRIFFON: Okay.
10	DR. MAKHIJANI: Well, if Mark,
11	let me get some clarity on what you have just
12	said. You said that some some more a
13	brief looking into the background and analysis
14	of the report would be in order, but not sort
15	of an extensive review.
16	CHAIRMAN GRIFFON: That is my
17	yes.
18	DR. MAKHIJANI: Is that what so
19	you are saying that we should do a little bit
20	more in terms of just understanding the report
21	and what went into it.
22	CHAIRMAN GRIFFON: Understanding
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1	of the numbers and stuff, yes. And then, only
2	to the extent that it is reviewing the
3	analysis files that are put up. But, I mean,
4	if you you know, for instance
5	DR. MAKHIJANI: If we could have
6	the analysis files for these 100, that would
7	be the most sort of brief thing we could do
8	before the Board meeting.
9	DR. MAURO: Mark, I have to ask a
10	question, because it is troubling me, and that
11	is that if the question really is not so much
12	well, listen, if we were to include all
13	these folks, these 4,000, it really wouldn't
14	have very much of an impact, and that is what
15	the 100 sampling did.
16	But that's not the question in
17	front of us. The question is, notwithstanding
18	the result of that, the question really is,
19	should these 4,000 people be part of the
20	definition of the because the Ruttenber
21	data is fundamentally sound. And if they
22	claim that these people had a potential for

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neutron exposure, they have to be included and
 under consideration. That really is the heart
 of the question, not what the impacts would be
 if you included them.

CHAIRMAN GRIFFON: T think 5 Yes. б you're right. But I want to -- I mean, I 7 think we need to look at the way NIOSH did their analysis first. But I think you're 8 And that's a decision -- perhaps as 9 right. 10 Larry or Brant -- I forget who stated it, but the idea of, how DOL wants to use this. You 11 12 know, that's sort of up to the -- up to Labor, 13 but it doesn't, you know, preclude us from weighing in about it. 14

15 So, you know, I think I just -- I 16 am not at a -- at a point where I want to, you know, make any motion for whether this -- you 17 18 that approach is appropriate or not, know, 19 John. I think I just don't know enough about 20 4,000 versus the those 100 sampling, et 21 cetera.

You know, if you look at it like

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1 Arjun did, you can -- you can say, well, it's 2 51 percent. But that's including that 3 Building 881, so I think I want to have a 4 chance -- an opportunity to sort that out a 5 little more in my mind, and maybe, you know, б bring the case before the full Board at some 7 point. MR. ELLIOTT: Mark, this is Larry 8 I might suggest that a little bit of Elliott. 9 10 forbearance here might benefit everybody, in that if we allowed DOL time to digest this 11 12 report, and determine how they are going to 13 react to it, and how they are going to utilize or not utilize the Ruttenber database, this 14 15 all may go away. 16 CHAIRMAN GRIFFON: Sure. That is And DOL I assume has -- well, it is 17 true. publicly available, so -- but I'm sure you 18 19 have given them copies of the report. 20 MR. ELLIOTT: Well, yes. CHAIRMAN GRIFFON: 21 Yes. 22 They are the primary MR. ELLIOTT: **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W. WASHINGTON, D.C. 20005-3701

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target audience for this report. They are the ones that need to have it to adjudicate under it.

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4 CHAIRMAN GRIFFON: Yes. And that is the other question. I mean, we always go 5 б -- we always ask our questions of DOL of, you 7 know, implementation of the class. And this is the implementation of the class question, 8 right? So I think in that respect we could 9 10 ask them at a Board meeting. They may not be prepared at this one because they have just 11 12 gotten the report. But we could ask them that 13 sort of question at a Board meeting. Is that your understanding, Larry? I mean --14

15 MR. ELLIOTT: Yes, that is -- you 16 know, I would hope that they have had -- it's I hope they had time to read it 17 19 pages. over the weekend, and by next week they will 18 19 have some sense of which direction they are 20 going to go perhaps. I will alert them that they can anticipate a question of that sort. 21

CHAIRMAN GRIFFON: Yes, definitely

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alert them that they can anticipate that. 1 2 All right. I think that's a good 3 place to leave it. The one thing I wanted to ask is -- we have a lot of people on the phone 4 call, and I think members of the public might 5 б have -- Terrie, I tried to get your one question out there, but if you or others have 7 other questions at this point. 8 Mark, I have 9 MS. BOLLER: one 10 question. I think there was a question -this is Carolyn at Senator Udall's office. 11 I 12 think there was a question about how many 13 people are on the NDRP list. Oh, 14 CHAIRMAN GRIFFON: yes. 15 Mutty, did you ever find that question? The 16 answer? MR. SHARFI: Yes. Is the question 17 for during the SEC period or just in the NDRP 18 19 total? 20 Well, as long CHAIRMAN GRIFFON: as we are comparing apples and apples, I think 21 the 4,163 was during the SEC period, right? 22 **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W.

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1	So I think I want to know
2	MS. BOLLER: Well, what I would
3	like to
4	CHAIRMAN GRIFFON: the SEC
5	period.
6	MS. BOLLER: Sorry, Mark. What I
7	would like to know is how many people during
8	the SEC period are on the list for NDRP? And
9	how many of those names on that list match
10	this is not going to come out right, but match
11	the Ruttenber list?
12	So, like, is Joe Blow on both of
13	them? Or is he only on one? So are we really
14	talking about 4,000-plus? Or some of that
15	4,000 already included? It's that 50 percent.
16	Does that make sense?
17	CHAIRMAN GRIFFON: Yes, yes.
18	MS. BOLLER: Am I rambling?
19	CHAIRMAN GRIFFON: Mutty, did you
20	get that question? I mean, I think you
21	presented the I had that question, too. Is
22	the 4,163 workers that we have been talking
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79 1 about, is that additionally or above the ones 2 identified in the NDRP? 3 DR. ULSH: This is Brant. The 4,163 is the people who were in -- who had 4 5 positive neutron dose in the Ruttenber, but б not in the NDRP. 7 CHAIRMAN GRIFFON: Right. 8 DR. ULSH: Does that answer your question? 9 10 CHAIRMAN GRIFFON: Well, how many were in the NDRP during that same time period 11 where you got the 4,163 number? 12 13 DR. ULSH: I don't know. Mutty, do you know? 14 15 MR. SHARFI: Mark, I can give you 16 some indication by the fact that there are 5,000 and odd people in the SEC currently, if 17 I remember the number correctly. So, for the 18 19 SEC period it would probably be something on 20 that same order. In the NDRP, it would be something less, obviously. 21 So --22 This is Wanda. MEMBER MUNN: **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W. (202) 234-4433 WASHINGTON, D.C. 20005-3701

80 1 MR. SHARFI: -- we are talking on 2 the order of 5,000. 3 MEMBER MUNN: This is Wanda. Remember, the report indicates that there are 4 also 486 individuals on the NDRP list that are 5 б not on the Ruttenber database. 7 CHAIRMAN GRIFFON: Right. MEMBER MUNN: So you can't simply 8 say one excludes 4,163 and not include the 9 10 fact that it does, nevertheless, include 486 11 that do not appear in that 4,163. 12 CHAIRMAN GRIFFON: Yes, yes, which 13 adds a little more uncertainty. 14 MS. BOLLER: Yes. 15 CHAIRMAN GRIFFON: That's true. 16 Anyway, I'm not sure we have an answer from Mutty on that number, but we can get that down 17 18 the line. I mean, I don't see that as 19 critical right now. 20 MR. SHARFI: There is about 3,700 people that have pre-1967 dose in the NDRP. I 21 22 believe -- and Brant can correct me -- I think **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W.

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1 the 4,163 are people that don't have а 2 matching year. Is that correct, Brant? Or is 3 that any match? How about if we get 4 DR. ULSH: 5 back to him on this? I don't want to give the б _ _ 7 CHAIRMAN GRIFFON: Yes, this is why we want the analysis files, okay? 8 DR. ULSH: Yes. 9 10 CHAIRMAN GRIFFON: Let's leave it 11 there. 12 other questions from Any the 13 public? 14 MS. BARRIE: Yes. This is Terrie, 15 and thank you, Mark, for asking that question. 16 CHAIRMAN GRIFFON: Terrie Barrie? BARRIE: Yes, Terrie Barrie 17 MS. with ANWAG. 18 19 CHAIRMAN GRIFFON: Yes. 20 MS. BARRIE: And what I would like to -- since you are going to be going to the 21 22 Department of Labor eventually to have them **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W. (202) 234-4433 WASHINGTON, D.C. 20005-3701 www.nealrgross.com

finalize who should be included in the class,
I honestly think that they should get a report
from SC&A to balance out -- and not just give
DOL the NIOSH report. I think it needs to be
balanced out to be fair, if you understand
what I am trying to get at.

7 CHAIRMAN GRIFFON: Yes. And I am 8 stopping short right now of tasking SC&A with, 9 you know, developing a report. But it gives 10 us a couple of weeks until the Board meeting, 11 and we will have an update at the Board 12 meeting on this.

MS. BARRIE: Okay.

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CHAIRMAN GRIFFON: in the 14 And 15 meantime, I am hoping that the data will be 16 posted, and we will have a few -- at least a few days to look at that data. 17 And we may come to the same conclusion that we need --18 19 you know, but I am stopping short right today, 20 if that's okay, Terrie. But we will -- we will bring it up at the Cincinnati meeting 21 22 next week during my work group update.

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1	MS. BARRIE: Okay.
2	CHAIRMAN GRIFFON: And if I
3	forget, you will remind me.
4	MS. BARRIE: I will.
5	CHAIRMAN GRIFFON: Okay.
6	MS. BARRIE: Thanks.
7	CHAIRMAN GRIFFON: All right.
8	MR. McKEEL: This is Dan McKeel.
9	CHAIRMAN GRIFFON: Hi, Dan.
10	MR. McKEEL: Hi. I have a comment
11	I guess. My comment is, it seems to me there
12	have been questions asked about how many
13	people total are in the NDRP, how many of them
14	were present during the SEC period, and same
15	sort of thing for the Ruttenber dataset.
16	And it was my understanding that
17	the basic analysis that was going to be done
18	is a detailed comparison and characterization
19	of those two datasets. So it seems to me that
20	the NIOSH report should have all of that data
21	clearly specified in a table. It could be a
22	very short table, you know, four cells, but
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that that information should be in the NIOSH report. And if it's not, then that should be added as an addendum.

And the other comment I have that 4 5 is related to that is Terrie Barrie obtained, б via the FOIA mechanism, some email 7 communications leading up to this report. And one that I remember -- I don't remember the 8 exact details, but Brant Ulsh commented in 9 10 particular on a discrepancy between the two in 11 datasets where there the were cases 12 Ruttenber dataset that did not appear in the 13 NDRP dataset.

And I think that is very important 14 15 Ι remember the previous because, as 16 discussions, the folks at NIOSH, including Brant and Larry Elliott and several others, 17 had made the comment that the reason that the 18 19 Ruttenber dataset was not examined for the 20 two last years was that there was no significant difference between the two. 21

And today -- and in the report it

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is quite clear that there are many differences between the two datasets, even though they may have originated from the same original source. But the two datasets are different.

And when I tried to read through 5 б those 19 pages that I got just recently, on 7 Friday I think, I couldn't clearly discern, you know, an A versus B comparison. 8 So I would just like to make the comment from one 9 10 observer that that report is not clear about what the basic mission of the NIOSH analysis 11 12 was supposed to be as I understood it.

13 And for that reason, I would like to endorse the idea that I would like SC&A --14 15 I understand that this may be premature and 16 that the Board needs to do that tasking, but I certainly would like to endorse the concept 17 that eventually SC&A needs to do their own 18 19 independent characterization and comparison of 20 those two datasets.

Thank you.

CHAIRMAN GRIFFON: Thank you, Dan.

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And I tend to agree that a couple of tables 1 2 in this report might have been helpful. But 3 we are going to get that backup support data 4 and look through it certainly, and I think that might help us to, with 5 the written б report, understand this a little better. 7 But thanks -- thanks for your

8 comment. And we will -- again, I will bring 9 that up at the full Board meeting, and whether 10 we go forward with tasking we will try to 11 determine there.

Any other comments at this point? (No response.)

Ι think that is where 14 Ι am 15 prepared to leave it. So there is just two 16 actions on the table. One is to get the supporting analytical data on the O: drive, 17 and the other would be to -- if NIOSH could --18 19 I know you have made attempts already this 20 morning, but to solicit comments from Margaret Ruttenber on the report. 21

MR. ELLIOTT: No, Mark, I think

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1 that's a work group effort. NIOSH has stated 2 its position in this report. You know, this 3 been cleared, and it's an institute has 4 report. If you guys want to approach Margaret 5 to seek her comment, that's your prerogative. б CHAIRMAN GRIFFON: Okay. Then, I 7 will take that action on myself. All right. Any other comments? 8 9 MS. PADILLA: My name is Judy 10 Padilla. I have one question. CHAIRMAN GRIFFON: Go ahead, Judy. 11 I recently received 12 MS. PADILLA: a letter from Rachel Leiton. 13 In that letter she said that NIOSH has exclusive 14 15 responsibility to conduct the dose 16 reconstruction. Okay. That being true, NIOSH is the final say in the 50 percent. 17 And my question is, I would like 18 19 to know if there is verification and 20 validation of the software of the matrices from NIOSH? And why can't the people who are 21 22 denied see these things? **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W.

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1 CHAIRMAN GRIFFON: Well, I think 2 that is a little broader question, but, Jim 3 Neton, do you want to --

this 4 DR. NETON: Yes, is Jim 5 It's coincidental I guess, but just as Neton. б of Friday we put on our website a verification 7 of the NIOSH IREP software that was done by It is under the IREP tool 8 our contractor. page on our website, and there is a 500-page 9 10 report out there that goes through in some detail a review of all of the calculations 11 12 I will be reporting on this that were done. 13 at the Advisory Board meeting next week in Cincinnati. 14

15 CHAIRMAN GRIFFON: And maybe 16 listen in on the Cincinnati Board meeting, if you can, Judy. Dial in for that. 17 You might, 18 you know, get further on your answer there. 19 MS. PADILLA: I'll do that. 20 CHAIRMAN GRIFFON: More information. 21 22 Okay. Anything else? **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS

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89 MEMBER PRESLEY: This is Bob. 1 I'm 2 in good shape. 3 CHAIRMAN GRIFFON: All right. Ι think we are ready to break at this point, if 4 there are no other comments. 5 6 (No response.) 7 Thank you all, and we will be looking for that data. And we will discuss it 8 more at the full Board meeting. 9 10 (Whereupon, the above-entitled 11 matter went off the record at 11:23 a.m.) 12 13 14 15 16 17 18 19 20 **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W. (202) 234-4433 WASHINGTON, D.C. 20005-3701 www.nealrgross.com